

“Doctor, what causes the noise in my ear?”

What causes tinnitus?

The noise in the ears that only you can hear is called tinnitus, a most common disorder. Some people hear a hissing in the ear, others a ringing and still others a whistling. The constant noise is distracting and annoying. Sometimes medicines are the cause. Aspirin and anti-inflammatory drugs like aleve or advil are examples. Head injury, vitamin B-12 deficiency, middle-ear infections, noises arising in arteries adjacent to the ear and a lifetime of exposure to loud sounds can lead to tinnitus. Meniere's disease consists of episodes of decreased hearing, tinnitus, and dizziness. Give up caffeine and nicotine. That might quiet the buzzing. Leave a radio playing soft music on a bedside table. The sound can neutralize tinnitus, which always worsens in the quiet of a bedroom. If music doesn't do the trick, turn the dial to a position where static is heard. That might cancel out your tinnitus. Devices called tinnitus maskers are worn like a hearing aid, and they can sometimes quell the inner noise. Tinnitus retraining therapy consists of counseling along with desensitization to the tinnitus noise. It takes a long time, but many have found it useful. Often, tinnitus appears when hearing starts to fade. Ordinarily, the constant sound of the world blocks tinnitus generated by all ears. When outside sound can't be appreciated, tinnitus takes over. A hearing aid helps when this is the basis of the problem.

There are many possible causes for subjective tinnitus, the noise only the patient can hear. Some causes are not serious. (For instance, a small plug of wax might cause temporary tinnitus.) Tinnitus can also be a symptom of serious middle ear problems such as infection, a hole in the eardrum, an accumulation of fluid or stiffening of (otosclerosis) the middle ear bones. Rarely, tinnitus can also be a symptom of a head and neck aneurysm or acoustic neuroma, either of which can be life threatening. These problems often involve a loss of hearing. Tinnitus may also be caused by allergy, high (or low) blood pressure, a tumor, diabetes, thyroid problem, injury to the head or neck, and a variety of other specific causes including: anti-inflammatories, antibiotics, sedatives/antidepressants and aspirin. (Aspirin can be a possible cause of tinnitus if over used, depending on the size of the patient. Talk to your doctor if you take aspirin and your ears ring.) The treatment will be quite different in each case. It is important to see a physician who specializes in ear disorders (an otolaryngologist) to attempt to determine the cause of your tinnitus, and what kind of treatment, if any, may be needed.

What is the most common cause of tinnitus?

Most tinnitus comes from damage to the microscopic endings of the hearing nerve in the inner ear. The health of these nerve endings is important for acute hearing, and injury to them brings on hearing loss and often tinnitus. Another possible cause of tinnitus may be a result of damage to the hair cells, which are within the cochlea or hearing organ. Advancing age is generally accompanied by a certain amount of hearing nerve impairment and even tinnitus. Exposure to loud noises is probably the leading cause of tinnitus in today's world and it often damages hearing as well. Unfortunately, many people are unaware of, or unconcerned about, the harmful effects of excessively loud industrial noise, firearms noise, high intensity music and other loud noises. Stereo headsets (i pods, walkmans, etc.) played too loudly appear to be an increasing cause of ear damage in otherwise healthy young people.

What is the treatment of tinnitus?

In most cases, there is no specific treatment for noises in the ear or head. If an otolaryngologist finds on examination that your tinnitus has a specific cause, he/she may be able to remove the cause and thus eliminate or reduce the noise. This investigation may require a fairly extensive workup including x-rays, balance testing and laboratory work. **However, most causes of tinnitus cannot be identified.** Occasionally, medicines or vitamins may help the noise even though no cause can be identified. Although these products can be prescribed or at times commercially advertised, the patient must realize that the outcome of such treatments are variable and what benefits one individual may not necessarily benefit another.

When there is no identifiable cause, can something be done to lessen the tinnitus?

Yes, the following list of do's and don'ts can help lessen the severity of tinnitus:

- 1) Avoid exposure to loud sounds and noises.
- 2) Get your blood pressure checked; if it is high, seek your doctor's help to get it under control.
- 3) Decrease your intake of salt (which impairs good blood circulation). Avoid salty foods and do not add salt to your food in cooking or at the table.

- 4) Avoid nerve stimulants such as coffee and colas (caffeine), tobacco and marijuana.
- 5) Exercise daily. It improves your circulation.
- 6) Get adequate rest and avoid over fatigue.
- 7) Stop worrying about the noise. (Some studies suggest that tinnitus may be associated with the limbic system which controls emotion. When tinnitus occurs and the patient becomes annoyed, he/she becomes upset and therefore the tinnitus may become more recognizable, creating a vicious cycle).
- 8) Reduce nervous anxiety, which may increase stress on an already tense hearing system.

Recognize your head noises as annoying but minor reality, and then learn to ignore them as much as possible. This type of control can sometimes be greatly enhanced via the techniques of biofeedback and/or masking.

What is biofeedback? Does it really work?

Biofeedback involves concentration and relaxation exercises designed to teach voluntary control of the circulation to various parts of the body and how to relax muscle groups throughout the body. When this type of control is accomplished, it may be effective in reducing the intensity of tinnitus in some patients.

What about masking? What is a tinnitus masker?

Tinnitus is usually more bothersome when the surroundings are quiet, especially when you are in bed. A competing sound such as ticking clock or a radio may help mask head noises, making them less noticeable. Some physicians suggest listening to FM music at low volume. Many patients have been helped by dialing between two FM stations for purpose of picking up subdued static, again at low volume. Such static may be extremely soothing, with a soft, rushing kind of sound known as white noise. Other patients prefer small electrical devices (e.g. Sleep Mate), which produce soothing background noise. These are sold through certain department stores and catalogs.

The tinnitus masker is a small electronic instrument built into or combined with a hearing aid. It generates a competitive but pleasant sound, which for some individuals masks the tinnitus by reducing awareness of head noises. The result is similar to successful use of white noise—by helping a patient overcome his awareness of tinnitus before going to sleep at night.

Will hearing aids help reduce the noise?

People with impaired hearing sometimes find that their hearing aids reduce head noise and occasionally cause it to go away. Even a person with a minor hearing loss may find that hearing aids relieve his/her tinnitus. Often, when the hearing aid is removed, the head noise returns to its former level.

Conclusion

Prior to any treatment of tinnitus or head noise, it is important that you have a thorough examination including an evaluation by your otolaryngologist. Once your doctor has completed this evaluation an essential part of the treatment will be to help you to understand your tinnitus, what has caused it, and how best it may be treated. Your hearing is too precious to treat carelessly. That is why this pamphlet is offered. We hope it has been helpful. If you have further questions, your otolaryngologist will be happy to try to answer them for you.

Websites

American Speech-Language and Hearing Association
<http://www.asha.org/public/hearing/disorders/Tinnitus.htm>

American Tinnitus Association
<http://www.ata.org/>

American Academy of Otolaryngology
<http://www.entnet.org/healthinfo/hearing/tinnitus.cfm>

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